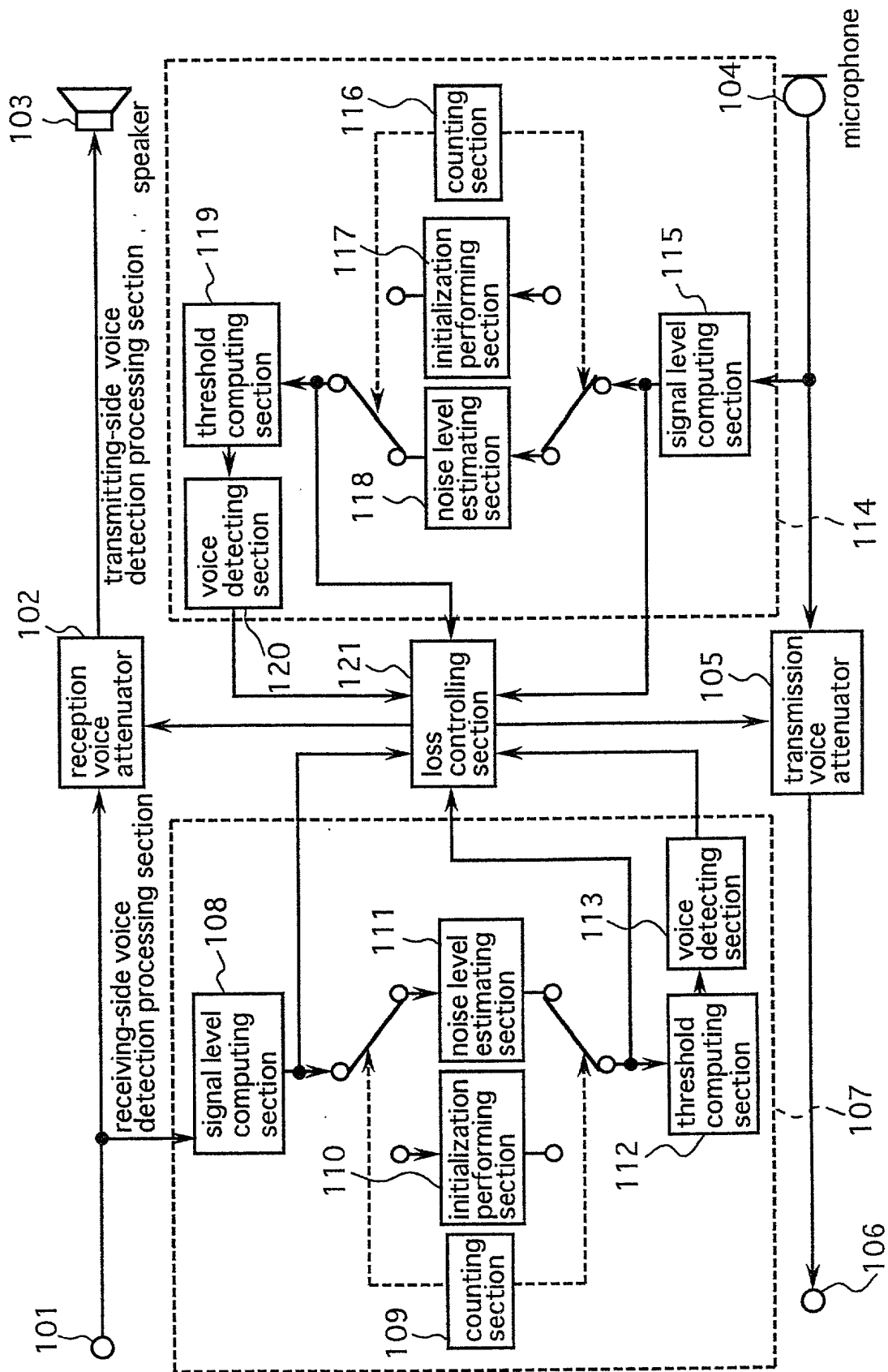
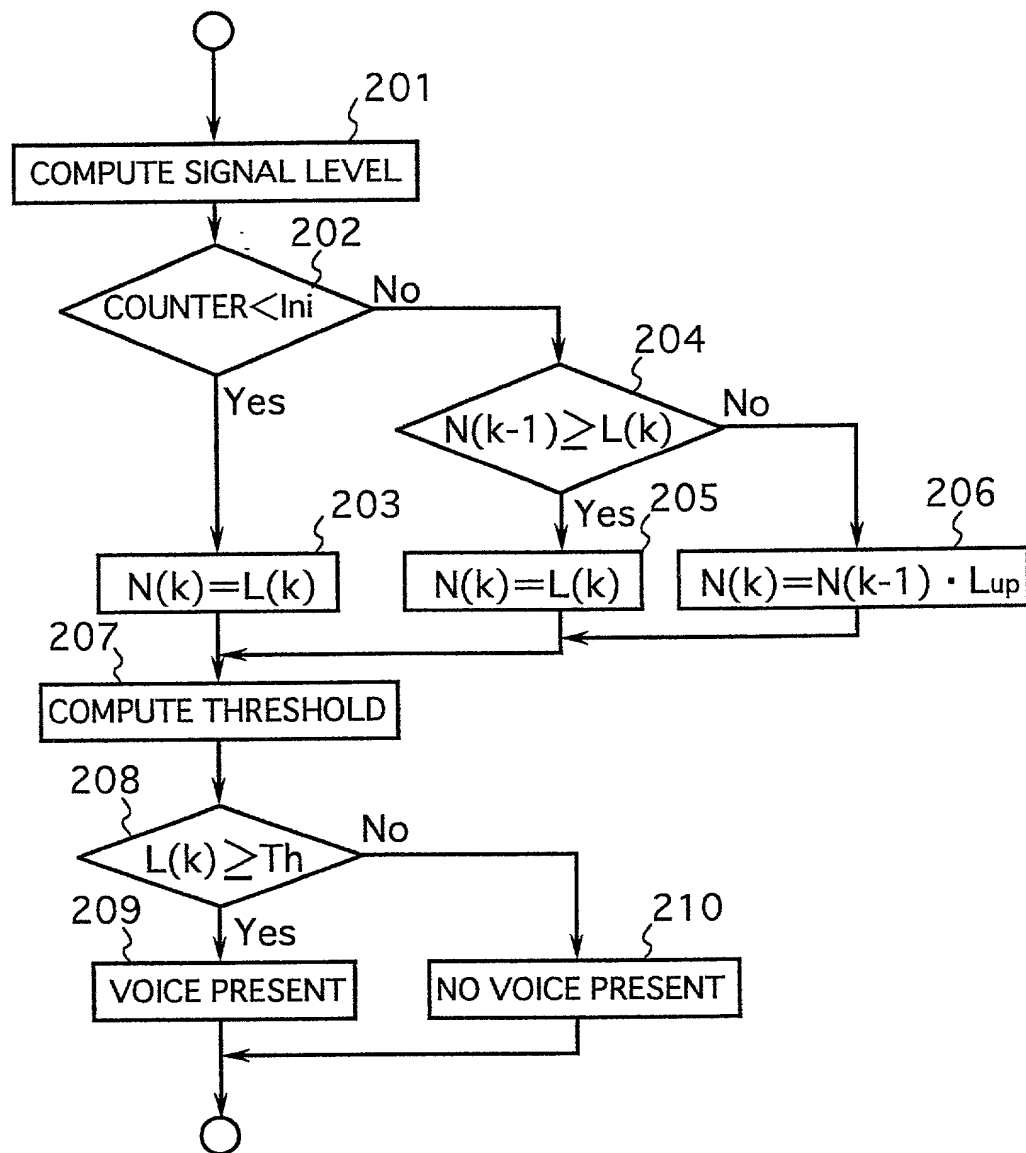


FIG. 1



# FIG.2



$L(k)$  : Input signal level  
 $N(k)$  : Noise level estimate  
 $k$  : Sample No. or Frame No.  
 $L_{up}$  : Updating amount ( $\geq 1$ )  
 $Th$  : Threshold  
 $Ini$  : Noise level estimate initialization period

FIG. 3

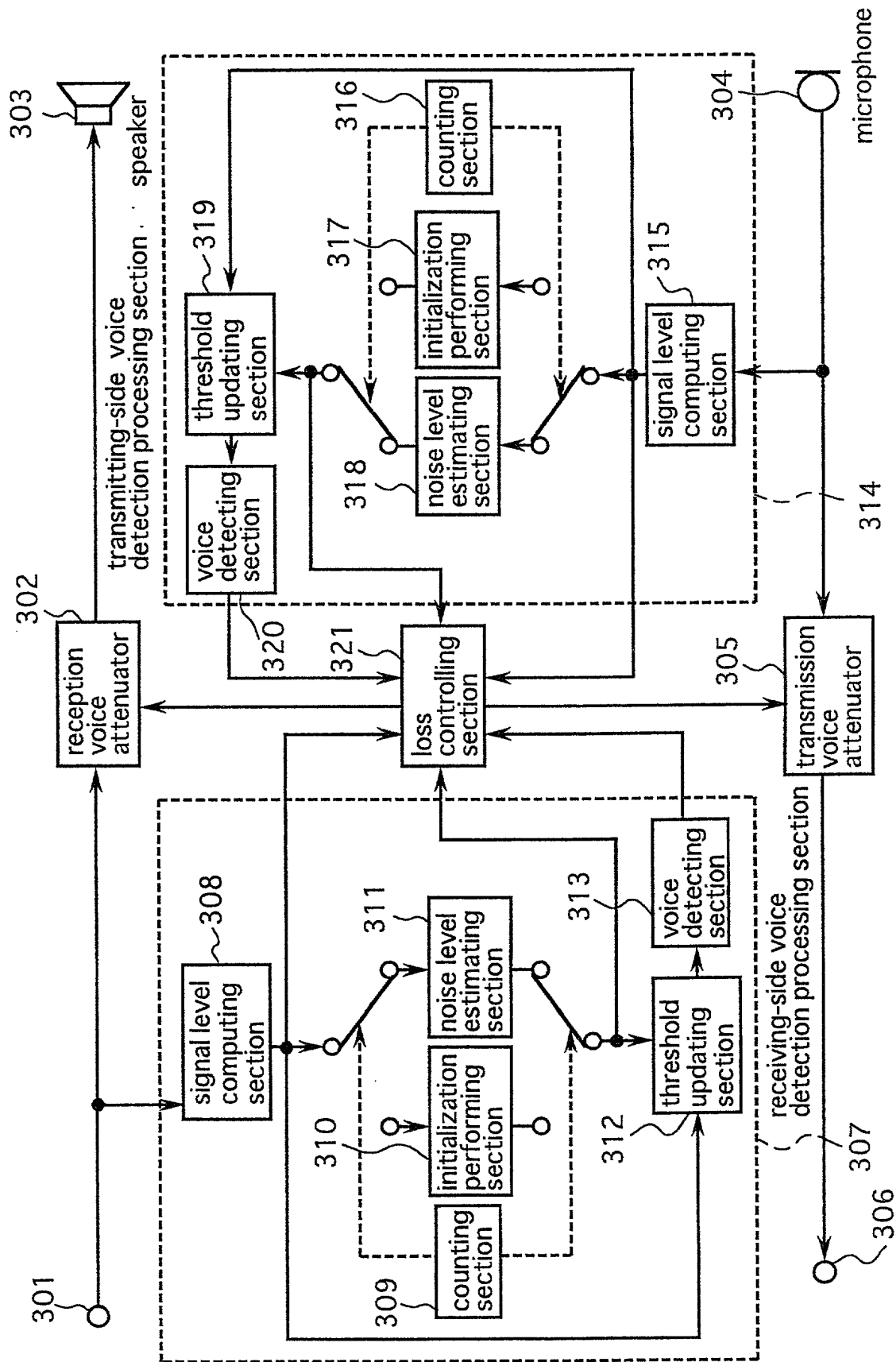
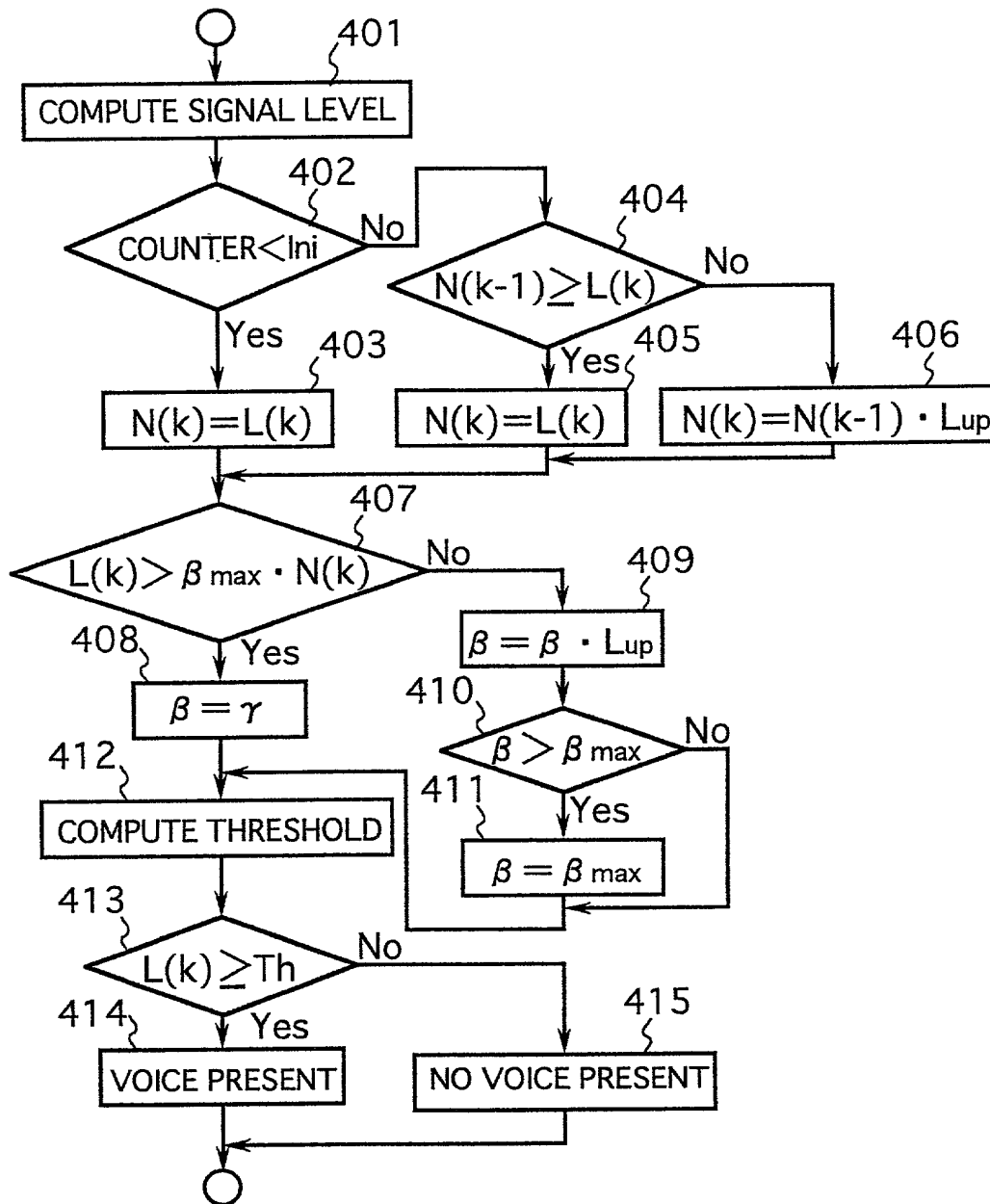
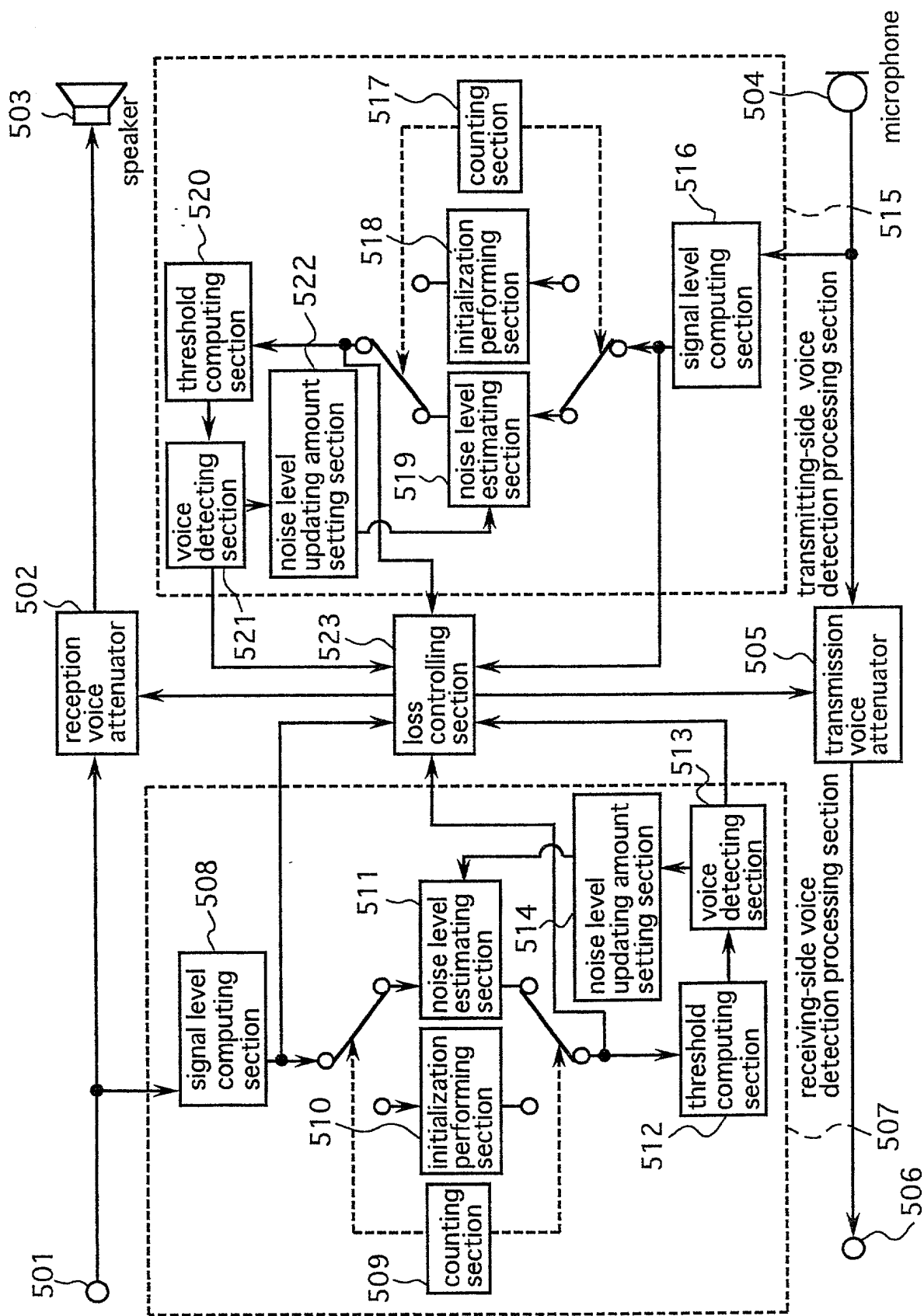


FIG.4

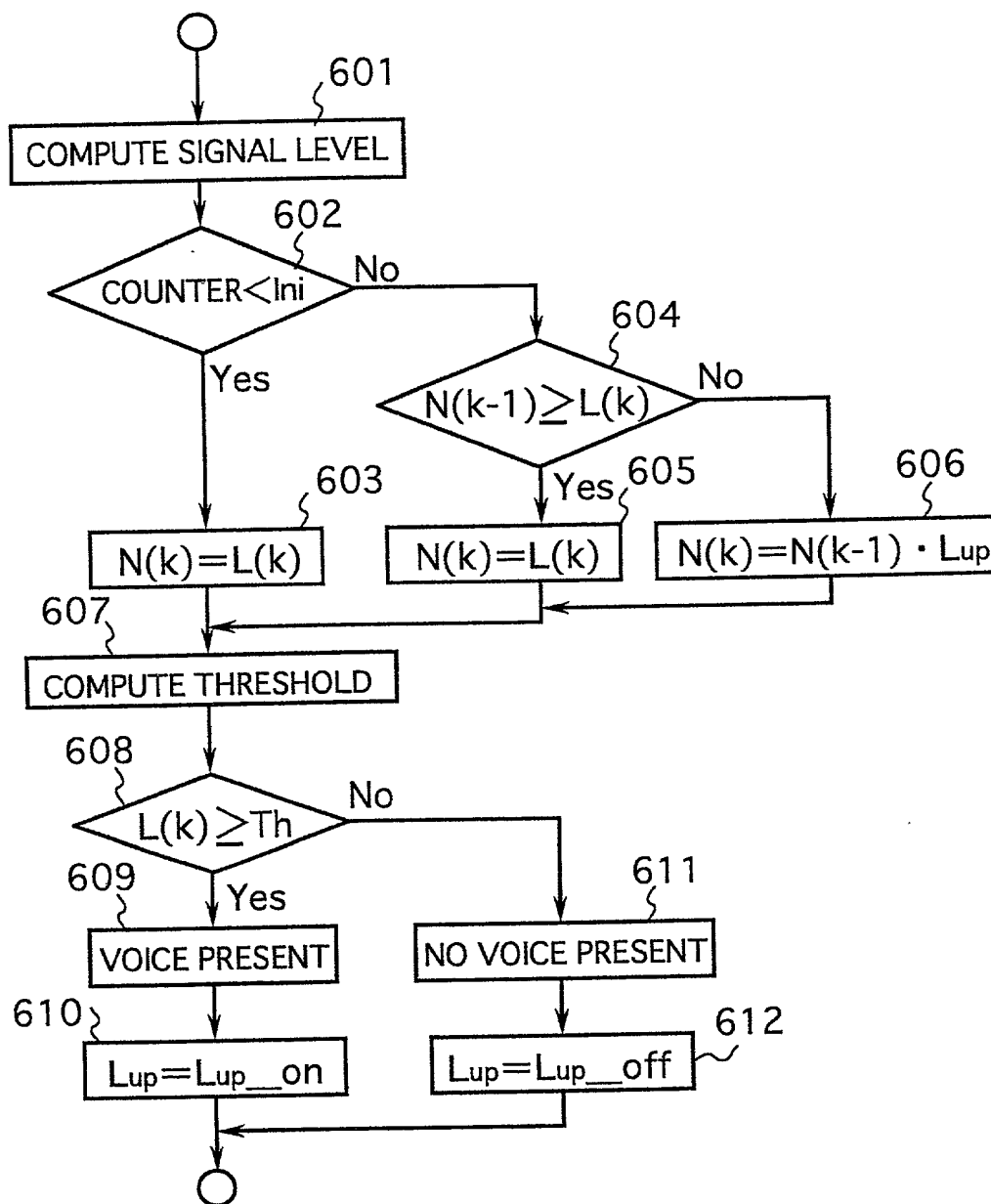


$L(k)$  : Input signal level  
 $N(k)$  : Noise level estimate  
 $k$  : Sample No. or Frame No.  
 $L_{up}$  : Updating amount ( $\geq 1$ )  
 $Th$  : Threshold  
 $\beta$  : Judgment coefficient  
 $\beta_{max}, \gamma$  : Constant  
 $Ini$  : Noise level estimate initialization period

FIG. 5



# FIG.6



$L(k)$  : Input signal level  
 $N(k)$  : Noise level estimate  
 $k$  : Sample No. or Frame No.  
 $L_{up}$  : Updating amount ( $\geq 1$ )  
 $L_{up\_on}, L_{up\_off}$  : Constant  
 $Th$  : Threshold  
 $Ini$  : Noise level estimate initialization period

FIG. 7

